

ABSTRACT OF THE DISCLOSURE

A catheter having a mandrel secured to the catheter or constrained within a dedicated lumen. In one embodiment, the catheter has an inner tubular member and an outer tubular member with a sidewall configured to

5 define a mandrel lumen longitudinally along an inner surface of the outer tubular member or along an outer surface of the inner tubular member. The mandrel lumen may be configured to allow the mandrel to be exchanged to adjust the handling characteristics of the catheter. The mandrel may occupy an intermediate portion of the catheter shaft, or may extend from the

10 proximal end to within proximal or distal shaft sections of the catheter. In coronary artery applications, the mandrel is configured to support the catheter as it bends through the aortic arch and enters the coronary artery.